

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

Amendments to the Drawings:

The attached sheets of drawings include changes to Figure 1 as well as new Figures 3-7. In Figure 1, the one of the reference numerals 93 has been changed to 94. New Figures 3-9 are added to illustrate previously disclosed subject matter.

Attachment: 7 Replacement Sheets
Annotated Sheet Showing Changes

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

REMARKS

In the specification, the paragraphs [0010], [0012], [0015], [0017], and [0018] have been amended.

In amended Figure 1, the reference character "93" for the annulus has been amended to be reference character "94". Figures 3-7 have been added.

Claims 1-33, 37-39, and 41-57 remain in this application. Claims 34-36 and 40 have been canceled. Claims 58 and 59 have been added.

I. DRAWINGS

The examiner objected to the drawings under 37 CFR §1.83(a) stating that the fluid pump, poppet valve, orifice, reduced-diameter flow path, tortuous flow path, flow restriction and/or restrictor, and the single-position valve mechanism must be shown or the features canceled from the claims. The examiner also objected to the drawings under 37 CFR §1.84(p)(4) because reference character "93" has been used to designate both threads and annulus. The examiner also pointed out that this also occurs in paragraph [0012] of the specification. The examiner also objected to the drawings under 37 CFR §1.84(p)(5) because they do not include the reference sign 103 mentioned in the description.

The applicants have added FIGURES 3-7 illustrating a fluid pump, poppet valve, orifice, reduced-diameter flow path, tortuous flow path, flow restriction and/or restrictor, and the single-position valve mechanism. These items were described in the description as well as in the originally-filed claims and therefore do not constitute new matter. The new FIGURES 3-7 are attached to this Reply. The applicants respectfully submit that these drawings satisfy the examiner's §1.83(a) objection and request that the examiner withdraw the objection.

The applicants have amended FIGURE 1 by replacing the reference character "93" for the annulus to be reference character "94". The applicants respectfully submit that this change satisfies the examiner's §1.84(p)(4) objection and request that the examiner withdraw the objection.

The applicants submit that reference character "103" is shown at the bottom of Figure 1 submitted as part of the Preliminary Amendment filed July 1, 2004. The applicants therefore respectfully request that the examiner withdraw the §1.83(a) objection.

II. SPECIFICATION

The examiner objected to the disclosure stating that informalities existed.

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

The applicants have amended paragraphs [0015] and [0017] above in accordance with the examiner's suggestions. The applicants respectfully submit that these amendments satisfy the examiner's objections and request that the examiner withdraw the objections.

With regard to the dual use of the reference character "93", the applicants have amended paragraph [0012] to use reference character "94" with respect to the annulus.

III. CLAIM OBJECTIONS

The examiner objected to claims 8, 10, 11, 30, and 50 because of informalities. The applicants have amended claims 8, 10, 11, 30, and 45 above and submit that the claim amendments satisfy the examiner's objections. The applicants therefore respectfully request that the examiner withdraw the objections to claims 8, 10, 11, 30, and 50.

The examiner stated that, should claims 16 and 17 be found allowable, the examiner would object to claims 35 and 36 under 35 CFR §1.75. The applicants have canceled claims 35 and 36.

IV. CLAIM REJECTIONS – 35 U.S.C. §112

The examiner rejected claim 34 under 35 U.S.C. §112, first paragraph. The examiner also rejected claim 40 under 35 U.S.C. §112, second paragraph.

The applicants have canceled claims 34 and 40.

V. CLAIM REJECTIONS – 35 U.S.C. §102

A. The Examiner's Statements

The examiner rejected claims 1-3, 6, 7, 13-15, 18-20, 22, 25, 26, 32-34, 37-39, 41-46, and 51-54 under 35 U.S.C. §102(b) as being anticipated by Wilson (U.S. Patent No. 4,653,524). The examiner rejected claims 1-11, 13-30, and 32-40 under 35 U.S.C. § 102(b) as being anticipated by McGarian et al.

B. The Law

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.¹ The identical invention must be shown in as complete detail as is contained in the ... claim.² To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing

¹ *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

² *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

may result from a given set of circumstances is not sufficient.”³ Thus, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish inherency of that result or characteristic.⁴ In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.⁵ In addition to disclosing every claim limitation, an anticipatory prior art reference must enable the practice of the invention and describe it sufficiently to have placed it in the possession of a person of ordinary skill in the field of the invention.⁶

C. Rejection of Claims 1-3, 6, 7, 13-15, 18-20, 22, 25, 26, 32-34, 37-39, 41-46, and 51-54 by Wilson

Claims 1-3, 6, 7, 13-15, 18-20, 22, 25, 26, 32-34, 37-39, 41-46, and 51-54 are not anticipated by Wilson because Wilson does not disclose controlling the temperature of the flowbore fluid by controlling the pressure drop across the valve mechanism. Wilson discloses a tubular valve sleeve 90 that is used in conjunction with a bypass valve 26 and a flow restrictor 96 to mix cold water from inlet 16 and the outlet of a hot water heat exchanger 22 in a mixing or blending chamber 28. The mixed hot and cold water then exits the valve assembly through outlet 18. Thus, Wilson teaches controlling the temperature of the water flowing through the flowbore 28 by controlling the mixture of cold water passing through bypass valve 26 and hot water coming from hot water heat exchanger through port 22. Wilson does not teach controlling the temperature of the water flowing through flowbore 28 or out of the outlet 18 by controlling the pressure drop through the valve mechanism or tubular sleeve 90 as required by the claims. The applicants therefore respectfully submit that the rejection is unsupported by the art and request that the examiner withdraw the rejection with respect to the claims.

D. Rejection of Claims 1-11, 13-30, and 32-40 by McGarian et al.

Claims 1-11, 13-30, and 32-40 are not anticipated by McGarian et al. because McGarian et al. does not disclose controlling the temperature of the flowbore fluid by controlling the pressure drop of the flowbore fluid across a valve mechanism. Nor does McGarian et al. teach or disclose a valve

³ *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999).

⁴ *In re Rijckaert*, 9 F.3d 1531, 1534, 28 U.S.P.Q.2d 1955, 1957 (Fed. Cir. 1993).

⁵ *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

⁶ *In re Paulsen*, 30 F.3d 1475, 1478-79 (Fed. Cir. 1994).

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

mechanism that controls the flow of flowbore fluid through the flowbore while maintaining the flowbore fluid in the control system body flowbore. McGarian teaches a bypass valve for use in a wellbore that selectively isolates the interior of a downhole assembly from the exterior thereof. Thus, McGarian et al. teaches controlling the fluid pressure downstream of the bypass valve by venting fluid pressure through valve sleeve 28 from within the flowbore to the outside of the control system body or casing 4. McGarian et al. makes no mention of controlling the fluid temperature flowing through the bypass valve. McGarian et al. also does not teach maintaining the flowbore fluid in the control system body or casing 4 as the flowbore fluid flows through the valve mechanism 28. The applicants therefore respectfully submit that the rejection is unsupported by the art and request that the examiner withdraw the rejection with respect to the claims.

VI. CLAIM REJECTIONS – 35 U.S.C. §103

A. Examiner's Statements

The examiner rejected claims 12 and 31 under 35 U.S.C. § 103(a) as being unpatentable over McGarian et al. in view of Patel (U.S. Patent No. 6,659,186). The examiner rejected claims 47-50 and 55-57 under 35 U.S.C. § 103(a) as being unpatentable over Wilson in view of McGarian et al.

B. Law

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness.⁷ If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

To establish a *prima facie* case of obviousness, the following tenets of patent-law must be adhered to: (a) the claimed invention must be considered as a whole; (b) the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination; (c) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and (d) reasonable expectation of success is the standard with which obviousness is determined.⁸ Both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the applicant's disclosure.⁹

⁷ *In re Rouffet*, 149 F.3d 1350, 1355, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998).

⁸ *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5 (Fed. Cir. 1986).

⁹ *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991).

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.¹⁰ Thus, a statement that modifications of the prior art to meet the claimed invention would have been "well within the ordinary skill of the art at the time the claimed invention was made" because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references.¹¹ Additionally, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.¹²

Also, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.¹³ In addition, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.¹⁴

C. Claims 12 and 31

Claims 12 and 31 depend from independent claims 1 and 22 respectively. The applicants repeat and hereby incorporate the remarks made above regarding allowable claims 1 and 22 by reference. For these same reasons the applicants respectfully submit that claims 12 and 31 are also allowable. Therefore, the applicants respectfully request that the examiner remove the rejection with respect to dependent claims 12 and 31 as well.

D. Claims 47-50 and 55-57

Claims 45-50 and 55-57 depend from independent claims 41 and 51 respectively. Applicants repeat and hereby incorporate the remarks made above regarding allowable claims 41 and 51 by reference. For these reasons, the applicants respectfully submit that claims 47-50 and 55-57 are also allowable.

¹⁰ *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); see also *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992).

¹¹ *Ex parte Levengood*, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993); see also *In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000); *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

¹² *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

¹³ *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

¹⁴ *In re Ratti*, 270 F.2d 810, 123 U.S.P.Q. 349 (CCPA 1959).

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

VII. AMENDMENTS MADE NOT RELATED TO PATENTABILITY

The applicants have amended claims 1, 3, 22, 41, and 51 to more clearly, correctly, and properly claim the invention and not for purposes of patentability.

These statements are not an admission that the other amendments were made for purposes of patentability, meant to be limiting in any way, or meant to be all-inclusive of amendments not made for purposes of patentability.

VIII. STATEMENT REGARDING CLAIMS

The applicants have argued the allowability of the claims by addressing the comments by the examiner in this paper as well as previously during the prosecution of this application. By doing so, the applicants are in no way limiting their ability to argue additional points of novelty regarding the independent claims or dependent claims at a later date.

CONCLUSION

The applicants respectfully request reconsideration the pending claims and that a timely Notice of Allowance be issued in this case. If the examiner feels that a telephone conference would expedite the resolution of this case, he is respectfully requested to contact the undersigned.

In the course of the foregoing discussions, the applicants may have at times referred to claim limitations in shorthand fashion, or may have focused on a particular claim element. This discussion should not be interpreted to mean that the other limitations can be ignored or dismissed. The claims must be viewed as a whole, and each limitation of the claims must be considered when determining the patentability of the claims. There may also be other distinctions between the claims and the prior art that have yet to be raised, but that may be raised in the future.

Unless the applicants have specifically stated that an amendment was made to distinguish the prior art, it was the intent of the amendment to further clarify and better define the claimed invention and the amendment was not for the purpose of patentability. Further, although the applicants may have amended certain claims, the applicants have not abandoned their pursuit of obtaining the allowance of these claims as originally filed and reserves, without prejudice, the right to pursue these claims in a continuing application.

If any fees are inadvertently omitted or if any additional fees are required or have been overpaid, please appropriately charge or credit those fees to Conley Rose, P.C. Deposit Account Number 03-2769 (ref. 1391-46000) of Conley Rose, P.C., Houston, Texas.

Respectfully submitted,

Page 22 of 24

154389.01/1391.46000

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

CONLEY ROSE, P.C.

A handwritten signature in cursive script, reading "Collin A. Rose", written over a horizontal line.

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Attachments

Appl. No. 10/775,840
December 22, 2005
Reply to Office Action dated June 27, 2005

Appendix